CLAIMS

1. (Amended) In a machine tool in which a spindle housing supporting a specifically directed spindle for rotation alone is supported for parallel motion in orthogonal three-axis directions XYZ by a numerical control mechanism, in determining a phase for a work to be feed-rotated around a specific axis,

a work phase determination method for machine tools with spindles comprising:

fixing a reference block to a periphery of a front end of the spindle housing of the spindle so as to forwardly protrude a little therefrom, said reference block comprising a board member in rectangle at plan sight,

installing an NC table of the numerical control mechanism on a work support-feeding device,

feed-rotating the work around the specific axis, and

correcting a rotation angle of the work in accordance with a rotation angle of the NC table at a time of an abutment between a phase reference section of the work and the reference block.

2. (Amended) A work phase determination method for machine tools with spindles as set forth in claim 1,

wherein said reference block is arranged right below the spindle at the lowest position of the spindle housing.

3. (Amended) A work phase determination method for machine tools with spindles as set forth in claim 1,

wherein said reference block is provided with a first plane perpendicular to a direction of the spindle and a second plane parallel to both of the direction of the spindle and the specific axis, the work is feed rotated normally or reversely around the specific axis to abut the phase reference section of the work against either or each of the first plan and the second plan, so as to find the amount of feed-rotation of the work at the time of this abutment.

4. (Amended) In a machine tool in which a spindle housing supporting a specifically directed

spindle for rotation alone is supported for parallel motion in orthogonal three-axis directions XYZ by a numerical control mechanism,

a work phase determination device for machine tools with spindles comprising:

a reference block comprising board members in square from side sight, forward-protrusively fixed a little right below the spindle at the lowest position of a periphery of a front end of the spindle housing, providing with a first plan perpendicular to a direction of the spindle and a second plane parallel to both of the direction of the spindle and the specific axis,

a work support-feeding device comprising an intermediate table in rectangular from plan sight horizontally fixed, a work driving table fixed on one end of a top face of the intermediate table, and a center push table fixed on the other end thereof, said work driving table installed an NC table, having a table main body fixed on the intermediate table,

a chuck portion supported on the table main body, rotatively driven around a specific axis in an X-axis direction by the NC table, and

a drive center supported on the table main body, positioned on the specific axis, supporting a rotation center of an end of the work grasped by the chuck portion,

in feed-rotating around the specific axis of the work, a rotation angle of the work is corrected in accordance with a rotation angle of the NC table at a time of an abutment between the phase reference section of the work and the reference block.

5. (Deleted)

6. (Deleted)